

the Aleutian Islands and Behring Strait. From this point they spread over North America and then South America. This great branch of the human family remains represented by the Mongols, Esquimaux and aboriginal Americans. The last and most important great branch, leaving in its wake the Dravidas of Ceylon and the southern part of Hindostan, occupied Southern and Western Asia, both sides of the Mediterranean and Red Seas, and Western Europe, throwing a small branch through Egypt into Nubia. To this branch of the human family belong nearly all the great nations and most progressive peoples of either pre-historic, or historic times. It includes the Caucasian race and those most nearly allied, and has been called Mediterranean. The Semitic, branching into the Arabic and Egyptian, and the Indo-Germanic or Aryan belong to this superior species of man. The Indo-Germanic branch has far surpassed all others, and is now dominant throughout Europe, the Americas, Australia and a large portion of Asia. All other races will eventually succumb in the struggle for existence. Numerical superiority must give way to intelligence; and those not plastic enough to become adapted to the new order of things must perish—or live under conditions that superior races would scorn.

The Indo-European branch attained superiority by reason of its enforced adaptation to conditions that lie at the foundations of all civilizations. Its geographical location gave control of the carrying trade by land and water between the southern part of Asia and the western part of Europe. This growing commerce brought to them all that was new and useful from either continent. It built up such nations as Phœnicia, and enabled them to extend their commerce, colonies, and influence. The

islands of the Mediterranean paved the way for short voyages in small boats and this naturally led to the invention and construction of better boats and to longer and more venturous voyages. The Mediterranean, with its advantages of position, islands and archipelagoes, and its northern coast ragged with peninsulas and minor indentations,—was the cradle of commerce. Its shores became the center of the power and enlightenment of the awakening world. It was here that at last an historical period became possible. After the genus Homo had gone through hundreds of thousands of years of almost hopeless but necessary struggle, one of the branches of this human tree had produced buds. Looking backward from the written record to the rock-record we see not the fall and defeat of man, but exactly the reverse, the rise of man, the victory achieved.

CHAPTER XIII.

HISTORIC TIMES.

PRE-HISTORIC and historic times are dovetailed together. There is no well-defined boundary between them any more than there is between the geological periods. We have to deal with a process of evolution in either case. The art of writing, like the building up word by word of the languages, was attained by small accretions. It grew up from crude beginnings, and it becomes therefore impossible to fix an exact date. The more the subject is studied the more evident the truth of this proposition becomes.

Crude picture-writings were the first attempts at anything like historical records, and tens of thousands of years must have elapsed before picture representations had been shortened and modified into such hieroglyphics as were used by the Egyptians and Aztecs. Hieroglyphics were in use in Egypt three or four thousand years before the Christian era, and perhaps still earlier. They were modified into alphabetical writing, probably by the Phœnicians, at an early period, and from them the principal alphabetical systems now in use were derived.

One of the sacred books of India, the Rig Veda, is probably the oldest literary production in the world. It is of a poetical and religious character, and of little historical value. It is supposed to date from about 1400

B. C., and comprises 1,028 hymns. The Vedas lay down the doctrine that there is one God above all other gods, "who created the earth, the heavens, the waters," and pervades all things, and that he is inseparably connected with nature, including the matter as well as the force, the visible Universe being the corporeal manifestation of God. The soul of man is considered as a temporarily detached particle of the universal divine soul. Exposed to earthly contaminating influences it becomes unfit to return to God, and so arises the doctrine of transmigration to other animals to extend the period of penance and purification. Finally, "absolute happiness is attained through absolute rest."

They have a trinity personifying the attributes of the principal deity, and a number of subordinate or demi-gods. They inculcate prayers, charity, fasting, sacrificial offerings of money, fruits and flowers, and religious tolerance.

India is the mother of religions, and from the ancient fountain-head have sprung a vast multitude of creeds embracing almost every imaginable theological idea. From this soil, rich in imagination and profound contemplation, but poor in investigation and scientific facts, have spread out branches to Egypt, Jerusalem, Athens, Rome and westward, enduring until the present time. Centuries before Christ they had their immaculately conceived Chrishna and their divine trinity.

About ~~ten~~ centuries before Christ, Buddhism arose and spreading into the populous eastern part of Asia has become the professed religion of the majority of the human race. And yet it has been propagated by preaching and missionary effort and not by the sword. However, it was powerfully assisted by the persecutions of its rivals and enemies. Buddhism claimed the exist-

ence of a supreme power, but not a Supreme Being. Its trinity is the Past, the Present and the Future. It taught that all men were equal; denied the interposition of Providence; things came about by unavoidable cause, not chance; that there is no such thing as individuality, and that at death or after any useful and preparatory transmigration, the soul ends finally in extinction.

The mother of Gotama, the founder of this religious-philosophical system, was represented by later believers as an immaculate virgin, and the belief prevailed that Gotama partook of the nature of both God and man; that he could at birth stand on his feet and speak, and at five months of age sit unsupported in the air; that there is a heaven of music, feasting, etc., for the good, and a hell of burning sulphur for the wicked; that there is a queen of heaven; that prayers may be offered by rote.

Among the most ancient books extant are the poems of Homer and some of the Hebrew Scriptures.

The student of ancient history is struck with the essential similarity of the prevailing conditions of the principal nations. The larger portion of the life history of each of the great nations of antiquity is made up of a catalogue of wars. The resources of the people, produced primarily from the soil by the agricultural population, and added to and made available by manufacture and commerce,—the product of brain and brawn, of hard and honest labor, was squandered in the erection of useless monuments and temples, and wasted in devastating wars. The common people had but a scanty living, and little opportunity for improvement. Kept in ignorance, and in dread of the anger of imaginary gods, they were easy to deceive. Their rulers were often tyrants. Afraid of gods and kings,—twin relics

of barbarism, they were contented with their lot, and bowed in homage to those who were in reality often their inferiors. It was impossible for them to make the effort necessary to rid themselves of the blinding glamor of pretentious authority, revered antiquity, and sacred rites and customs. Broad minded men found safety in silence, for superstitious ignorance is always intolerant. Those who proclaimed a newly discovered truth from the house-top met with the reward of martyrdom.

More discreet reformers worked in tactful ways to advance the standard of intelligence, while the adherents of the well-fed and prosperous kings and priests were pulling backward. On the whole, the gain during the portion of the historical period preceding the advent of Christianity, was about the same as would be expected from the operation of the unaided natural laws of evolution. The advance made by the favored Mediterranean nations was, of course, greater than that of others. It was, however, unequal ; remarkably great in some ways, but in others strangely deficient.

Egypt, for several thousands of years the center of ancient learning and civilization, has seen the Phoenicians, and later her young rivals on the northern shores of the great inland sea, Greece and Rome, pass her in the race. The old and ossified fell by the wayside, while the young and plastic forged to the front. The Assyrian, Babylonian, Chaldean and Hebraic civilizations had their day and left their impress upon those that came after.

Among all the nations of ancient times Nature was always pictured—with the Earth as the center, and man as the most important object of all. Everything was made for him. To suit his convenience or ambitions the miraculous change of the course of Nature was

a reasonable event. Terror-stricken at the formidable operations of Nature around him, which he did not understand, escape was looked upon as the result of the miraculous interference of his deities. They helped to protect him while he subdued the wild domain they had made for him, and over which they had given him dominion. Few actions were so trivial as not to require the guiding and protecting attendance of their deities. There is abundant evidence of this fact in the Bible, in the Greek literature, or in any ancient records.

The belief was general that gods, heroes, monsters and men, mingled together in council, in battle, and in all the important affairs of life. The Earth was flat, the blue sky was the floor of the heavens, resting on the mountainous rim of the Earth, and sustaining the lantern-like stars, and the little Sun and Moon. The wind was the breath of God. In the interior of the Earth, Pluto reigned over the shades of the departed, ferried across the river Styx by Charon. In that abyss all sorts of ingenious tortures were inflicted upon those who had offended the gods.

Hundreds of mythological fables were piously believed. There were harpies, and prophets, and witches, and stone tablets from heaven, an universal deluge, and self-moving rocks; bulls with brazen feet, impossible giants, dragon's teeth that leaped forth as men, gods piloting ships, apples of gold, ants as big as sheep, sorcerers, sirens, cyclops, enchanters, brides and children of the gods, burnt offerings, human sacrifices, divine oracles, and ordinary coincidences magnified into miracles. Such superstitions prevailed long after the Phœnicians ceased to be the masters of the sea, and Europe began to emerge from barbarism.

In the times of Rameses II, over thirty-two centuries

ago, the Egyptians cut a ship canal from the Red Sea to the Nile, at the cost of 120,000 lives and untold sums of money. This great work was the worthy precursor of the present Suez canal, and approached it in engineering skill. It is a relief to notice such great expenditures of human energy to promote peace and commerce,—in a country where so much had been lavished on useless temples and monuments.

Egypt was the cradle of agriculture, the mechanical and architectural arts, navigation, writing, and the Mediterranean civilization from the ruins of which our own has arisen. The observed coincidences between the positions of Sirius and the annual inundation of the Nile, and between the tides and the positions of the Sun and Moon, led to the worship of the Sun and stars, and of the invisible divinity from whom visible nature was supposed to emanate. The Egyptians believed in the immortality of the soul, the fall of man, a few trinities, fasts and penances, transmigration of the soul through animals for purification, sacrifices, mysteries, oracles, omens, resurrection and future judgment. Children groping their way in the dark.

The later and higher civilization, philosophy and religion of ancient Greece, was in part an offshoot of and was modified by the systems of Egypt and Southern and Western Asia. After the original colonization there were repeated invasions of ideas from the southeast, that left their marks on the younger and more ambitious nations of the nature-favored Grecian peninsula and archipelago.

The Greek philosopher, Thales, about B. C. 640, considered water as the first principle, and that the Sun and stars were living beings, deriving their aliment from the sea at the time of their rising and setting. A cen-

tury later the popularity of the water theory was shaken by the assertion of Anaximenes that air was the source of things; that the human soul, water and the earth itself were composed of air, and that the air infinite in extent is God. The Earth was "like a broad leaf floating in the air." This doctrine led to the belief that the Earth and the planets were possessed of souls and consciousness, and was readily accepted in an age when belief in fetishism was general and of a grade more primitive than that of the present day.

The belief prevailed that not alone the air was a spiritual being, but as chemists discovered gases they were believed to be ghosts; some of whom gathering in mines and wells were capable of inflicting great injuries and destroying life. The dawn of philosophy, Science and religion was full of crude and childlike speculation. Anaximander taught that the Earth is of the form of a cylinder, held in the center of the Universe by the air; and that the Sun, Moon, planets and fixed stars are each fastened to a crystalline ring and revolve around the Earth, the Sun being farther off than the fixed stars. Similar cosmological notions are endorsed, explained or apologized for in these so-called enlightened times.

In their turn the Hindu, Egyptian, Jew and Greek passed along the same meandering intellectual path. Evolution is shown as distinctly in mental as in cell growth.

About B. C. 540, Pythagoras was born. It was asserted by his followers, with the usual show of testimony, that he performed miracles, predicted future events, and was present with the people and addressed them in several different places at the same time. To the Pythagoreans, numbers were actual things, so they laid great stress upon their value, imputing great sig-

nificance to the number seven. They strangely hit upon the correct idea that the Sun was in the center of the system, and that around it the Earth and the other planets revolved. They believed the Moon to be inhabited by giants, that the Milky Way was formerly the path of the Sun, that the Universe was eternal, and spherical in shape, that the Earth was transitory, that the soul of man is a part of the universal soul and could exist without the body, and that there are good and evil spirits as made manifest by dreams and sickness. They believed in life after death, transmigration, and future rewards and punishments.

With the Pythagorean abandonment of the geocentric theory of the Universe, mankind seemed to be at the dawn of a new era of investigation and scientific discovery, but alas the glad time had to await the sad struggles and martyrdoms of many centuries of darkness. Trustworthy observation and research gave way to the fruitless wanderings of metaphysics and the dreams of theology, and precious time and talent were wasted in futile and vain imaginings.

Great thinkers, without the guidance derived from the study of nature, reasoned themselves into the most absurd notions. Xenophanes regarded the Earth as the flat surface of a mass extending indefinitely downward. His followers disdained the study of nature, believing visible phenomena to be illusions, and that time, motion, and space do not actually exist,—our senses being deceived. There was no such thing as bodily existence.

They believed that some of their teachers and priests never died, but ascended bodily to the skies, yet denied that anything could be proven to be true. The only things to be believed in were their own feelings or

subjective sensations; all objective impressions were pronounced unworthy of trust.

The disciples of Plato, (born about B. C., 426,) believed that their master was born of a virgin, and was the son of the god Apollo. Plato taught the unity and eternity of God, the immortality of the soul, transmigrations, future rewards and punishments; that objects were the embodiment of ideas, that ideas are the only real existences, that former states of existence can be remembered, that what we see is not real, that there is only one world, that the world is an animal with a soul, that there is a race of subordinate gods, that the Earth is the oldest of all bodies and the center of the Universe, the use of the liver is to receive and reflect the images of thoughts; and he thought the individual should be in every respect subordinate to, and the creature of, the state.

The philosophical confusion that naturally led to the idealism of Plato as its culminating point, was succeeded in the next generation by the inductive philosophy and materialism of Aristotle. Instead of commencing to build in the clouds, he laid his foundations on solid rock. First collect the little facts, the material, the particulars, and then proceed upward to universals,—the true scientific method of inquiry. Aristotle was the John the Baptist of Science. Unfortunately he could not do justice to his own methods, for the world was illy supplied with facts; he had little foundation on which to build. The necessary result was a wonderful structure strangely combining truth and error, the strength of manhood with the fancy of youth, but it marked the high water point of human advance up to the age in which he lived. His knowledge of the operations of Nature was too limited to enable him to free

himself from most of the current erroneous views relating to the cosmos, but his genius cleared the way for the recognition of the vast importance of carefully ascertained facts.

The conquests of Alexander resulted, on the breaking up of his empire, B. C., 323, in the establishment under the Ptolemies of the great Alexandrian museum and school of philosophy and Science. No effort was spared to make Alexandria the intellectual center of the Earth. Asia and Europe were searched for volumes to add to the Alexandrian Library, until a total of 700,000 volumes was reached. Learned men from every nation of the known world came to Alexandria in pursuit of their studies. There was a free and liberal interchange of ideas. The attainments of the East were supplemented and modified by the profound speculations of the Grecian philosophers.

The mythology of Greece gave way to the older and more mature creeds of the East. In this general mingling of the best intellectual attainments of the race, Science had its origin. It was the opportunity of the seekers for the truth.

The wars, the conquests, the new sights brought under the observation of the conquerors, the efforts necessary to success, the impetus to commerce, the building and rebuilding of cities, the general diffusion of knowledge, the breaking down of political barriers, the necessity for great deeds, the friction of active minds, the new channels of thought and endeavor,—all tended to expand and strengthen the human mind. The best knowledge, heretofore confined to a few limited localities, became the common property of all. Science was unshackled, while creeds were being readjusted. There was life in the new city, and its influence was everywhere felt.

To its native Egyptian population was added hundreds of thousands of Greeks and Jews. The city was filled with splendid palaces, temples, theaters, avenues, gardens, obelisks and fountains; and its great lighthouse, built of white marble, was one of the seven wonders of the world. The mausoleum, in which rested the body of Alexander, was surpassed in interest by the museum and library. The fame of the great conqueror, perpetuated in the grandeur of the mausoleum and the name of the city, has found its imperishable monument in the increase, perpetuation and diffusion of knowledge, arising from the founding of the museum and library by his half-brother, Ptolemy Soter.

In connection with the museum were a botanical and zoological garden, an astronomical observatory, a chemical laboratory, and an anatomical dissecting room. The globular form of the Earth was maintained, but the Earth was still believed to be fixed in space; 1,022 stars were catalogued, and eclipses and the motions of the Moon and planets studied; and to the Alexandrian school must also be credited the works of Euclid, Archimedes, Eratosthenes, Hipparchus and Ptolemy. The most important philosophical advance was attained by the adoption of the method proposed by Aristotle, of beginning with the study of the particulars of phenomena, and with that knowledge as a base rising to the consideration of general principles. This is the foundation of the modern scientific method. Grecian power and influence had reached the highest point and the outlook for civilization was encouraging.

By the middle of the second century, B. C., the Roman conquests had included Greece and Macedonia, and a century later (B. C., 48,) Alexandria was besieged and taken by Julius Cæsar, and in a few years more, all the

Mediterranean nations were absorbed and became parts of the Roman Empire, which extended from Britain to the Persian Gulf, with a population of about 120,000,000.

These disastrous wars and political changes were followed by an era of peace, with Rome as the center of power and learning, and Alexandria second only to the capital of the empire. Each conquered nation had its king and its own peculiar deities and religion. Captives and treasures were brought to Rome and all kinds of worship were tolerated.

The power formerly exercised by numerous rulers now became centralized under one emperor, who was even worshiped as a deity. Following the political tendency—the theological ideas changed from polytheism to monotheism. This irresistible movement once established, it is evident that the form of religion endorsed by the emperor, with himself as the almost divine earthly head, would eventually become the accepted religion of the whole empire. It is equally evident that the facts of Nature were yet inadequately understood, and that any cosmological theory, or philosophical system based thereon, would stand no chance of success against any considerable movement actuated by zeal and religious fervor. Reason thus unsupported would be easily disarmed in the presence of enthusiasm, sentiment and faith,—in an age when no error was too absurd to have zealous followers.

Scientific investigation is the work of time, and requires great and pains-taking labor. Theological speculation is easy and rapid, and with "the wish the father to the thought," fixed conclusions are easily reached. The times were unsettled. A multitude of dethroned gods left the people free and ripe for the introduction of

a new or unknown god, and a vital religious movement that would strongly appeal to human passion and feeling, and that could promise rewards commensurate with all the most vivid imagination could desire. Supplement this hope with the promised punishment for lack of faith in the new religion, and we have the most powerful appeal possible to the hereditary fear that lies at the foundation of all supernaturalism. The doctrine preached, that the time was near at hand when the Earth would be destroyed by fire, was another strong lever to act upon the fears of the superstitious. The idea of an unknown god was the natural crown of a structure based upon the primitive fear of the dark, or unknown, and therefore, the unrestrained imagination could picture him full of love and fatherly kindness for the faithful, while at the same time jealous of other gods, and ready to punish unjustly, endlessly and hopelessly those, who, however conscientiously, failed to openly acknowledge his supremacy.

The ruling motive of many converts to any faith is—that they may eventually be found on the safe side.

The operation of the same natural laws can be traced in the evolution of theological ideas and emotional religion, from their origin with primitive man, to their culmination in the Dark Ages and their present decline.

The great trunk of Christianity as it arose above all rivals at Rome, was the blended product of many fertile soils. A large root derived its nourishment from the ancient, and in some respects more philosophical, creeds of India, another came from Egypt, another from the polytheism of Greece and Rome, a goodly portion of the feeders from Jerusalem; all, revived by the simple, earnest, communistic, virtuous, unceremonious faith of

the lowly Nazarene. The new faith started out with the great advantage of being unnoticed because of its comparative obscurity, and its later success was guaranteed by the unselfish zeal, and unwavering faith of its early propagandists, who went forth with resolute confidence to proclaim their gospel to all men.

The new religion was opportune in the fact that it taught the brotherhood of man, at the time when political, religious and race barriers were broken down by the general assimilation of the civilized world in the Roman Empire. For these and kindred reasons it spread quietly and rapidly, invading the palace and the hovel, and before it had been considered by those in authority as an important political factor, its adherents were numerous and strongly intrenched, with its missionaries in every part of the Empire. Starting in a passive age, and being essentially active and aggressive, and socially well organized, to attain supremacy it only remained to secure control of the machinery of state. Commencing with gentle persuasion and peace, success brought arrogance, dissension, force and bloodshed.

The wife and daughter of the Emperor Diocletian were Christians, when in A. D., 303, Christian soldiers mutinied and refused to join in the customary pagan worship. Christian officers were cashiered and persecuted, and massacres followed. Two years later Diocletian abdicated, civil war followed, and the victorious Constantine, the competitor for the purple, who received the support of the Christians, ascended the throne, and the ascendancy of paganized Christianity was assured throughout the great empire.

As time elapsed Christianity became more paganized and less like the simple, charitable and communistic creed of the early disciples. There were imposing

rituals ; the Trinity after Egyptian traditions ; a female deity ; angels, martyrs and saints in the places of the lesser gods of the pagans ; a probationary future state in place of transmigration ; the ancient symbol of the cross ; fasting, celibacy ; pilgrimages, consecrated water and the miracle-performing dust, bones and other relics, an offshoot of fetich worship ; transubstantiation, canonization, worship of the dead ; in a word, everything demonstrated the truth that a step, and a short one at that, had been taken in the evolution of religion. This step carried with it the fetich-like reverence for the Bible, as containing a divine revelation of all that it was good for man to know.

With the Church backed by the civil power, it was no longer safe for men to doubt, and follow the light of reason and investigation. First emotional, and then doctrinal religion was in the saddle, and young Science was strangled in the birth. The crude geocentric theory of the Universe with all that it implied, was the scientific lesson of the sacred book, and it had to suffice. Splitting hairs over slight shades of difference among theologians took the place of philosophy. The influence of the Alexandrian effort was diverted and lost to the world. A thousand years were required before the rubbish could be cleared away and the attempt to build upon the solid foundation of investigation could be again resumed in Europe.

At the time Alexandria was taken by Julius Cæsar, the larger portion of the celebrated collection of books was destroyed by fire. To make amends as far as possible, Mark Antony presented the great (200,000 vols.) rival collection of Pergamos to Cleopatra to be added to the Alexandrian Library. About A. D. 391, the Christian Bishop Theophilus, with the consent of the

Emperor, dispersed and destroyed the great library, or, almost all of it. What was left was destroyed by order of the Mohammedan Caliph Omar, A. D., 642, who said: "If the books agree with the Koran, the Word of God, they are useless, and need not be preserved; if they disagree with it, they are pernicious. Let them be destroyed."

There can be no doubt that the greater portion of this most valuable collection of manuscripts was destroyed by the permission and active participation of the Christian patriarchs of Alexandria. Yet, this irreparable injury to mankind, this colossal crime, stands not alone in the annals of the harm that religious bigotry has done. The great and valuable library at Tripolis was entered by Christian crusaders A. D., 1109; the first room contained the Koran, and the whole collection was burned. Thousands of valuable Arabic manuscripts were publicly burned at Granada by Cardinal Ximenes. In Mexico the Spaniards burned large quantities of American picture-writings. The faithful have been ever ready to destroy secular and scientific records. The other side must not be heard. The progress of religion through the ages has left a wide trail of blood and ashes.

Not content with the destruction of the Alexandrian Library, Saint Cyril, the loathsome nephew of the infamous Theophilus, caused the philosophical teacher Hypatia, a follower of Aristotle, the daughter of Theon, the mathematician, to be stripped naked in the streets of Alexandria, dragged to a church and there killed. Her body was cut to pieces, the flesh scraped from her bones with shells, and the quivering mass cast into the fire. This was the end of Greek philosophy, the end of reason and Science, in Christian countries, for many precious centuries. It was one of the most effective arguments the world has known; and Christianity

profited by it. Teaching the truth by word or book ceased.

It was not all smooth sailing. There were conflicting opinions, interests, and ambitions, and the Roman Empire found itself launched on a stormy sea. Many minor contentions were disposed of from time to time, when a sect arose in Arabia, led by the prophet Mohammed, opposing the doctrine of the Trinity, and the divinity of Christ, and asserting the unity of the deity. "There is but one God, and Mohammed is his prophet," was the cry of the faithful. The successors of the Prophet fought for their religion and conquered. Jerusalem, Alexandria, Carthage, and later Constantinople were wrested from the hands of the Christians. The Mohammedan empire became larger than that of Rome itself. Only the almost accidental success of Charles Martel (A. D., 732) at the great battle near Poitiers, in France, prevented the complete conquest of Europe by the invading Saracens.

Fortunately for mankind, one of the results of this unpromising Asiatic movement, was a renewal of scientific research, under the later and richer caliphs, which accomplished a little more than to restore our knowledge of astronomy and mathematics to the position it had attained in the time of Ptolemy. They determined the shape and size of the Earth, mapped the visible stars, and made advances in mathematics, chemistry and medicine. They also succeeded in finding, translating, and preserving, some of the Grecian philosophical and literary works.

While the Mohammedan revival of learning was in progress, Christendom was passing through the period known as the Mediæval, or Dark, or Middle Ages. They lasted for about 1,000 years, ending with the discovery

of America in 1492. The common people lived in huts and hovels, cold and poverty-stricken, without floors or windows, with fires built upon the ground, and poorly supplied with food and clothing. Ignorance and want were the rule. The power and wealth were in the hands of the aristocracy and clergy.

The rights of man were at a low ebb. Wrong, robbery, extortion, and oppression were submitted to without question and as a matter of course. Filth, parasites, disease, faith, justice, (?) by wager of battle, serfdom, poverty, ignorance, witchcraft, superstition, wars, everywhere prevailed, and the suffering people, blindly hoping for happiness beyond the grave, were contented with their lot. What a commentary on contentment! What had nearly fifteen centuries of Christianity done toward emancipating mankind from ignorance and tyranny? Few unbiassed historians will deny that the evil it had encouraged and permitted, greatly overbalanced any good results with which it may be credited. It had feared, opposed and persecuted the scientific investigators, and was thereby an active agent in the perpetration of an irreparable wrong.

While this state of things lasted there was little safety for person or property. The condition of women was deplorable. The various religions of the world have had a tendency to repress the self-reliance of women and prevent their intellectual development. The laws of natural development were thus interfered with to the detriment of the succeeding generation. Thanks to liberty and patriotism under the Republic, the ancient Roman matron was the mother of heroes. The same cannot be said of her submissive Christian successor. The Era of Science is making itself felt in the emancipation, elevation and education of woman.

If the destruction of millions of human lives and the waste of untold millions in treasure and property, with all the attending horrors and suffering of needless war, are good and useful deeds, then the Church should enjoy full credit for the wars of the crusades—and many others.

In the eleventh, twelfth, and thirteenth centuries, mad efforts were made to recover the sacred relics at Jerusalem from the possession of the Saracens. These wars were called Crusades, because each soldier wore upon his shoulder, or breast, a cross, and from this he was called a crusader. Eight distinct crusades were organized, and conducted with varying degrees of success, involving the loss of millions of lives that if properly directed might have been useful. On the whole, and as a final result, the foolish efforts were a dismal and total failure; none of the objects of the wild and shameful raids having been accomplished. Indulgences were granted to those who went; many were the prayers, and boundless the faith, but of no avail. If in response to their supplications the Lord helped either side, it must have been the Mohammedans. It is said that an army of little children was raised with the idea that innocence might, through the favor of heaven, triumph where valor was of no avail; but they perished on the way to the Holy Land.

No story was too big for the gigantic credulity of that age. There were, of course, many miracles. One, perhaps entitled to as much credit as any, is related about one of the leaders of the holy crusaders, who had been beheaded in Palestine, being seen returning home carrying his head under his arm. No wonder the crusaders burned the valuable library at Tripolis. It is impossible to sum up in the mind the total loss to the world resulting from the crusades.

Every student of history is familiar with numerous wars, massacres, assassinations and persecutions instigated by the churches to prevent the spread of rival doctrines. It is enough to simply mention here the atrocious massacre of the Huguenots on St. Bartholomew's Eve, A. D., 1572. The sane mind revolts at such barbarous deeds, and dislikes to dwell upon them longer than necessary.

Columbus, accepting the idea of the globular form of the Earth, believed that by sailing westward the East Indies could be reached, and the commercial interests of Genoa helped by the new route. Years of disappointment and ecclesiastical opposition passed. The final discovery of America, in giving a new impetus to commerce did the same for civilization. Magellan circumnavigated the Earth and forever set at rest the question of its shape. The old Egyptian and Arabic astronomers were right—and the Church fallible and wrong. An opening had been made for the revival of Science. Soon, measures of the curvature of the surface of the globe were again made and its size approximately determined. The agreement was close with the results long before reached by the Arabic scientists.

Still, the Earth was believed to be in the center of the system, and man the great object of creation. Men were coming back to Mother Earth at about the same point from which they started on their vain celestial flight a thousand years before. Think of the waste of time and labor—blood and treasure.

About the year 1507, Copernicus completed a book—*On the Revolutions of the Heavenly Bodies*. For thirty-six years he dared not publish his work for fear of persecution by the Church of Rome,—and by the equally hostile Protestant leaders at Wittenburg. At

length he decided to publish it. The printed book was placed in his hands May 24, 1543, as he lay on his death-bed, a few hours before he expired. The book established the truth of the heliocentric theory. The Church declared that it contradicted revelation, and solemnly condemned it as heretical. To read it was to risk damnation. Fortunately for him, its great author was beyond their reach. Luther called Copernicus an upstart astrologer, and a fool, denied that the Earth revolves, and remarked that "Sacred Scripture tells us that Joshua commanded the Sun to stand still, and not the Earth."

The powerful denounced and attacked the true theory of the solar system; the ignorant ridiculed. There must have been many who were convinced that Copernicus was right. Was there one in all Christendom who dared to openly maintain the truth?

There was one and one only; let his name never perish,—Giordano Bruno. He publicly held the infinity and plurality of worlds, and that we are surrounded by, and only by, space and stars. He was arrested and confined for years in a dungeon, without books, paper or friends, to make him recant. He would not renounce what he knew to be true to save his life. He was publicly burned at the stake in Rome, February 17th, A. D., 1600, as a heretic. When enveloped with the flames, he turned his face away in disgust from a monk who held out to him a crucifix. He died as he had lived—a defender of the truths his murderers feared. Noble Bruno, thy murderers were no less savage than those who,—over a thousand Christian years before, mangled the beautiful Hypatia.

About ten years after the martyrdom of Bruno, the little telescope of Galileo, magnifying only thirty times,

had demonstrated the truth of the theory of Copernicus. The whole theological pack, of every shade of doctrine, set up a howl that has never been surpassed but once, and that was in our own day on the publication of Darwin's *Origin of Species*. The new scientific facts were dutifully overthrown by a class of men who knew nothing about it, and by another rather intelligent squad who knew better, but wanted to retain their jobs and corporeal bodies. Some profound theologians were unable to trace the inhabitants of the other planets back to Noah's ark, or satisfy themselves how they could be subject to the plan of salvation. The fight centered around Galileo. The epithets "Infidel" and "Atheist" were freely used, but they failed to extinguish the light of the hated telescope. Galileo announced that there were mountains on the Moon that was made to rule the night, and spots on the Sun that was created perfect. There was no end in sight. So Galileo was summoned before the Holy Inquisition and compelled to recant. Sixteen years later, in 1632, he published his work, *The System of the World*. He was again summoned before the Inquisition, accused of claiming that the Earth moves around the Sun, and obliged to recant, under pain of death, on his knees with his hand on the Bible. For the remaining ten years of his life he was kept in prison, or under surveillance, and at his death, at the age of 78 years, he was denied burial in consecrated ground. To a sensitive, aged man such treatment was torture.

The Church has persecuted men of Science, and Christian sects have persecuted each other ; but Science is guiltless of such crimes.

Almost every important advance of Science has met with the powerful opposition of the Church. In every